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Use of Adjustable-Volume Pipettors		
Revision: #3	Replaces: 4/17/02	Effective: 2/13/03

1. Purpose: To be able to use and repeatably dispense a volume of liquid to stabilize samples collected for the Moscamed Program or any other program that requires dispensing small volumes (microliters - μ ls.) of liquid.

2. Supplies Required: To request additional pipettors or disposable pipet tips, contact the Laboratory Supplies Coordinator at the APHIS Analytical and Natural Products Chemistry Laboratory (ANPCL), Plant Protection and Quarantine, in Gulfport, MS at (228) 822-3106.

2.1 adjustable volume pipettor which accurately dispenses 10 - 100 μ l of liquid

2.2 yellow disposable pipette tips (1-200 μ l capacity)

3. Use of pipettor - the volume of stabilizer solution added to the sample will depend on the type of sample collected. If a water sample is collected, 80 μ l will be added to each 8.0 ml water sample. If vegetation samples are collected, 500 μ l will added to each test tube containing the leaves and 50.0 ml of water.

For water samples:

3.1 Using the black knobs at the top of the pipettor, turn until "080" appears in the white window on the side of the pipettor. This means the pipettor is now set to dispense 80 μ l of liquid.

3.2 Fit a yellow pipette tip snugly on the end of the pipettor.

3.3 Depress the large white plunger at the top of the pipettor to the first stop. You will notice that if you press harder, the plunger will depress a little further. By pressing harder, you have depressed the plunger to the second and last stop. Only press hard enough to go to the first stop.

3.4 With the white plunger depressed, place the pipette tip into the stabilizer solution, being careful not to submerge the entire tip. Slowly release the plunger and 80 μ l of stabilizer will be drawn into the pipette tip. Add the stabilizer to the water sample by depressing the white plunger to the second and last stop. By depressing the white plunger through both stops, you are assured that all of the stabilizer has been added to the sample.

3.5 Once you have added stabilizer to a sample, eject the pipette tip by depressing the smaller white plunger on the side of the pipettor. Dispose of the used tip by conventional means. Use a new pipette tip for each sample.

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For vegetation samples:

- 3.6 Using the black knobs at the top of the pipettor, turn until "100" appears in the white window on the side of the pipettor. (This number is read from the top to the bottom of the pipettor.) This means the pipettor is now set to dispense 100 μ l of liquid.
- 3.7 Fit a yellow pipette tip snugly on the end of the pipettor.
- 3.8 Depress the large white plunger at the top of the pipettor to the first stop. You will notice that if you press harder, the plunger will depress a little further. By pressing harder, you have depressed the plunger to the second and last stop. Only press hard enough to go to the first stop.
- 3.9 With the white plunger depressed, place the pipette tip into the stabilizer solution, being careful not to submerge the entire tip. Slowly release the plunger and 100 μ l of stabilizer will be drawn into the pipette tip. Add the stabilizer to the test tube containing the 50 mls of water by depressing the white plunger to the second and last stop. By depressing the white plunger through both stops, you are assured that all of the stabilizer has been added to the sample. **Repeat this process 4 mores times so that 500 μ l of stabilizer is added to each tube.** Insert pipette tip into the test tube but do not submerge tip into the water. This will prevent any contamination from the water sample to the stabilizer from occurring.
- 3.10 Once you have added stabilizer to a sample, eject the pipette tip by depressing the smaller white plunger on the side of the pipettor. Dispose of the used tip by conventional means. Use a new pipette tip for each sample.